



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-9317; Directorate Identifier 2016-CE-029-AD]

RIN 2120-AA64

Airworthiness Directives; Diamond Aircraft Industries GmbH Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Diamond Aircraft Industries GmbH Model DA 42 airplanes. This proposed AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as an uncommanded engine shutdown during flight due to failure of the propeller regulating valve caused by hot exhaust gases escaping from fractured engine exhaust pipes. We are issuing this AD to correct the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590.

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Diamond Aircraft Industries GmbH, N.A. Otto-Straße 5, A-2700 Wiener Neustadt, Austria, telephone: +43 2622 26700; fax: +43 2622 26780; email: office@diamond-air.at; Internet: <http://www.diamondaircraft.com>. You may review this referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9317; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Mike Kiesov, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4144; fax: (816) 329-4090; email: mike.kiesov@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2016-9317; Directorate Identifier 2016-CE-029-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory,

economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued AD No. 2016-0156, dated August 2, 2016 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

Two cases were reported of uncommanded engine in-flight shutdown (IFSD) on DA 42 aeroplanes. Subsequent investigations identified these occurrences were due to failure of the propeller regulating valve, caused by hot exhaust gases coming from fractured engine exhaust pipes. The initiating cracks on the exhaust pipes were not detected during previous inspections, since those exhaust pipes are equipped with non-removable heat shields that do not allow inspection for certain sections of the exhaust pipe.

This condition, if not corrected, could lead to further cases of IFSD or overheat damage, possibly resulting in a forced landing, with consequent damage to the aeroplane and injury to occupants.

To address this potential unsafe condition, Diamond Aircraft Industries (DAI) developed an exhaust pipe without a directly attached integral heat shield that allows visual inspection over the entire exhaust pipe length. DAI issued Mandatory Service Bulletin (MSB) 42-120 and relevant Working Instruction (WI) WI-MSB 42-120, providing instructions to install the modified exhaust pipes. As an interim measure, an additional bracket was designed to hold the exhaust pipe in place in case of a pipe fracture.

For the reasons described above, this AD requires replacement of the exhaust pipes with pipes having new design, and prohibits (re)installation of the previous design pipes.

You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9317.

Related Service Information under 1 CFR part 51

Diamond Aircraft Industries GmbH has issued Mandatory Service Bulletin MSB 42-120, dated June 24, 2016, and Work Instruction WI-MSB 42-120, dated June 24, 2016. In combination, this service information describes procedures for replacing the exhaust pipes with exhaust pipes having a new design. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section of this NPRM.

FAA's Determination and Requirements of the Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with this State of Design Authority, they have notified us of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

Costs of Compliance

We estimate that this proposed AD would affect 130 products of U.S. registry. We also estimate that it would take the following to comply with the requirements of this proposed AD:

It would take about 1 work-hour per product to comply with the installation of additional exhaust clamps required by this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$125 per product.

Based on these figures, we estimate the cost of this proposed AD on U.S. operators for the installation of additional exhaust clamps to be \$27,300, or \$210 per product.

It would take about 4 work-hours per product to comply with the exhaust pipe replacement required by this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$1,990 per product.

Based on these figures, we estimate the cost of this proposed AD on U.S. operators for the exhaust pipe replacement requirement to be \$302,900, or \$2,330 per product.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new AD:

Diamond Aircraft Industries GmbH: Docket No. FAA-2016-9317; Directorate Identifier 2016-CE-029-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Diamond Aircraft Industries GmbH DA 42 airplanes, serial numbers 42.004 through 42.427 and 42.AC001 through 42.AC151, that have a TAE 125-02-99 or TAE 125-02-114 engine installed, are equipped with an exhaust pipe, DAI part number (P/N) D60-9078-06-01, or Technify P/Ns 52-7810-H0001 02, 52-7810-H0001 03, or 52-7810-H0001 04, and are certificated in any category.

Note to paragraph (c) of this AD: Airplanes equipped with an exhaust pipe, DAI P/N D60-9078-06-01_01 or Technify P/N 52-7810-H0014 01, are not affected by this AD.

(d) Subject

Air Transport Association of America (ATA) Code 78: Engine Exhaust.

(e) Reason

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as an uncommanded engine shutdown during flight due to failure of the propeller regulating valve caused by hot exhaust gases escaping from fractured engine exhaust pipes. We are issuing this AD to prevent failure of the propeller regulating valve, which could result in forced landing with consequent damage to the airplane.

(f) Actions and Compliance

Unless already done, do the following actions. For the purpose of this AD, if the flight hours accumulated since first installation of an affected exhaust pipe is not known, use the total hours time-in-service (TIS) accumulated on the airplane.

(1) At whichever of the following compliance times that occurs later, install additional exhaust pipe clamps following the INSTRUCTIONS section of Diamond Aircraft Industries GmbH Work Instruction WI-MSB 42-120, dated June 24, 2016, as specified in the Accomplishments/Instructions paragraph of Diamond Aircraft Industries

GmbH Mandatory Service Bulletin MSB 42-120, dated June 24, 2016. The replacement required in paragraph (f)(2) of this AD may be done in lieu of installing additional exhaust pipe clamps.

(i) Before or upon accumulating 1,300 hours TIS since the affected exhaust pipe was first installed on an airplane; or

(ii) Within the next 200 hours TIS after the effective date of this AD or within the next 12 months after the effective date of this AD, whichever occurs first.

(2) At whichever of the following compliance times that occurs later, replace the exhaust pipes listed in paragraph (c) of this AD with an exhaust pipe DAI P/N D60-9078-06-01_01 or Technify P/N 52-7810-H0014 01. Do the replacement following the INSTRUCTIONS section of Diamond Aircraft Industries GmbH Work Instruction WI-MSB 42-120, dated June 24, 2016, as specified in the Accomplishments/Instructions paragraph of Diamond Aircraft Industries GmbH Mandatory Service Bulletin MSB 42-120, dated June 24, 2016.

(i) Before or upon accumulating 2,800 hours TIS since the affected exhaust pipe was first installed on an airplane; or

(ii) Within the next 200 hours TIS after the effective date of this AD or within the next 12 months after the effective date of this AD, whichever occurs first.

(3) After installing an exhaust pipe DAI P/N D60-9078-06-01_01 or Technify P/N 52-7810-H0014 01, as required by this AD, do not install an exhaust pipe listed in paragraph (c) of this AD.

(g) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, Standards Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Mike Kiesov, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City,

Missouri 64106; telephone: (816) 329-4144; fax: (816) 329-4090; email: mike.kiesov@faa.gov. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) *Airworthy Product*: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) *Reporting Requirements*: For any reporting requirement in this AD, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

(h) Related Information

Refer to MCAI European Aviation Safety Agency (EASA) AD No. 2016-0156, dated August 2, 2016, for related information. You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9317. For service information related to this AD, contact Diamond Aircraft Industries GmbH, N.A. Otto-Straße 5, A-2700 Wiener Neustadt, Austria, telephone: +43

2622 26700; fax: +43 2622 26780; email: office@diamond-air.at; Internet:
<http://www.diamondaircraft.com>. You may review this referenced service information at
the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For
information on the availability of this material at the FAA, call (816) 329-4148.
Issued in Kansas City, Missouri on October 17, 2016.

Pat Mullen,
Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.

[FR Doc. 2016-25655 Filed: 10/24/2016 8:45 am; Publication Date: 10/25/2016]